

**Amendments to the Abstract:**

Please amend the abstract, pages 64-65, by replacing it with the following amended Abstract.

**ABSTRACT**

**FACILITATING PROTEIN FOLDING AND SOLUBILITY  
BY USE OF PEPTIDE EXTENSIONS**

~~Disclosed herein are~~ The present invention comprises novel compositions and methods for enhancing the solubility and promoting the adoption of native folding conformation of ~~a~~proteins or ~~polypeptides~~ of interest expressed by recombinant DNA techniques. In one ~~One~~ embodiment of the present invention ~~relates to a~~ the protein or polypeptide of interest is modified through either a carboxyl- or an amino-terminal peptide extension, so as to promote folding within host cells. ~~Another~~ In another 10 embodiment the peptide-extended protein or polypeptide of interest is recovered in good yield from inclusion bodies by ~~relates to a method for enhancing the~~ in vitro renaturation ~~of a protein or polypeptide of interest expressed by recombinant DNA techniques, in circumstances where, following expression, a substantial percentage of the expressed protein or polypeptide of interest is localized within inclusion bodies. Yet another embodiment of the~~ The present invention relates to an ~~further includes~~ expression vectors comprising a nucleic acid sequence encoding a peptide extension and a multiple cloning site for inserting, in-frame with the peptide extension sequence, a nucleic acid sequence encoding a protein or polypeptide of interest. The peptide extensions of the present

invention comprise ~~different amino acid sequences and intrinsic net charges, depending upon the specific species. The total length of the peptide extensions comprise peptides of~~ 61 amino acid residues or less, ~~whereas the said peptides having net intrinsic charges of the peptide extensions range from about -20 to about -2 and or from about -20 to about +2, for peptide extensions fused to carboxyl and or amino-termini, respectively. Primary objectives of the present invention include: (i) enhancing the solubility, while concomitantly optimizing the folding, of proteins of interest into their biologically active conformations in host cells ; (ii) characterizing the features of the carboxyl and amino terminal peptide extension that are necessary for their protein folding activity within host cells; (iii) determining whether these carboxyl and amino terminal peptide extensions can promote renaturation of mis folded proteins *in vitro*; and (iv) identifying protein characteristics which determine behavior of the protein as a substrate for the peptide extension mediated folding described herein.~~